

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
1	transceiver	<p><u>Family 1</u></p> <p>’686 Patent, Claims 17, 36, 40</p> <p><u>Family 2</u></p> <p>’881 Patent, Claims 17, 18, 21, 23, 25, 26, 29, 31, 33, and 37</p> <p>’193 Patent, Claims 1, 9, 10, 11, 12, 13</p> <p>’601 Patent, Claims 8, 9, 13, 14, 15, 16, 17, 18, 21</p> <p>’014 Patent, Claims 1, 3</p> <p><u>Family 3</u></p> <p>’882 Patent, Claims 9, 13’048 Patent, Claims 1, 5</p> <p>’5473 Patent, Claims 10, 28</p> <p>’608 Patent, Claims 1, 2, 3, 4</p> <p>’510 Patent, Claims 21, 22</p>	<p><u>Proposed Construction</u></p> <p>Plain and ordinary meaning, which is “communications device capable of transmitting and receiving data”</p> <p><u>Extrinsic Evidence<sup>2</sup></u></p> <ul style="list-style-type: none"> <li>• 1998 &amp; 2004 Merriam-Webster Dictionary definition of “transceiver”: a radio transmitter-receiver that uses many of the same components for both transmission and reception</li> <li>• 2002 McGraw-Hill Dictionary of Scientific and Technical Terms definition of “transceiver”: A radio transmitter and receiver combined in one unit and having switching arrangements such as to permit both transmitting and receiving</li> <li>• U.S. Patent No. 7,844,882 at 5:18-57</li> <li>• ITU-T G.993.2 VDSL2 Standard</li> <li>• ITU-T G.992.1 ADSL Standard</li> </ul> <p><u>Family 1 Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• ’686 Patent at 1:24-2:67.</li> </ul>

<sup>1</sup> Where patents in a patent family share specifications, an identification of intrinsic evidence as to one patent in the family equally identifies the equivalent passage for the remaining patents in the family.

<sup>2</sup> Defendants reserve the right to rely upon any claim construction briefs, declarations, transcripts, orders, and memorandum opinions, including all intrinsic and extrinsic evidence cited therein, in any other case in which TQ Delta alleged infringement of one or more of the Asserted Patents and/or related patents, including the consolidated cases *TQ Delta LLC v. 2Wire, Inc.*, No. 1:13-cv-01835-RGA (D. Del.) and *TQ Delta LLC v. ADTRAN Inc.*, No. 1:14-cv-00954-RGA (D. Del.).

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
		<p><u>Family 4</u> '008 Patent, Claim 14</p> <p><u>Family 6</u> '835 Patent, Claims 8, 24 '112 Patent, Claims 8, 10, 11, 12, 14</p> <p><u>Family 9</u> '411 Patent, Claims 10, 11, 17, 18, 19, 25 '577 Patent, Claims 16, 30, 37, 38, 53, 54 '348 Patent, Claims 1, 3, 9, 11 '055 Patent, Claims 11, 17, 19 '4473 Patent, Claims 1, 3 '809 Patent, Claims 1, 3, 4, 6, 8, 10, 11, 13, 15, 17, 18, 20, 22, 25, 27</p> <p><u>Family 10</u> '354 Patent, Claims 10–12 '988 Patent, Claim 16</p>	<p><u>Family 2 Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• '193, '601, '014 Patents at Abstract, Figure 1, &amp; Figure 2</li> </ul> <p><u>Family 3 Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• '882 Patent at 5:18–57</li> <li>• '5473 Patent at 5:23–62</li> <li>• '608 Patent at 5:35–6:7</li> <li>• '510 Patent at 5:41–6:14</li> <li>• '048 Patent at 5:23–62</li> </ul> <p><u>Family 4 Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• '008 patent at Figure 1, 1:13-18, 1:25-60:2, 3:24-51</li> </ul> <p><u>Family 6 Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• '835 patent at Abstract, 2:34-51, 3:28-31, 4:32-36, 5:7-10, 7:67-8:8</li> </ul> <p><u>Family 9 Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• '411, '577, '348, '055, '4473, '809 patents at Abstract</li> <li>• '411, '577, '348, '055, '4473, '809 patents at Fig. 1</li> <li>• '411 Patent at 1:33–2:22, 2:51–8:34, 9:26–10:5, 13:6–16, 20:38–43</li> <li>• '577 Patent at 1:30–2:18, 2:47–8:31, 9:23–10:2, 13:4–14, 20:38–43</li> </ul>

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<u>No.</u>	<u>Term</u>	<u>Asserted Claims</u>	<u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u>
			<ul style="list-style-type: none"> <li>• ’348 Patent at 1:33–2:22, 2:51–8:34, 9:26–10:5, 13:6–16, 20:38–43</li> <li>• ’055 Patent at 1:37–2:27, 1:56–8:46, 9:39–10:21, 13:30–41, 21:1–6</li> <li>• ’4473 Patent at 1:39–2:29, 2:58–8:46, 9:39–10:21, 13:30–41, 21:4–9</li> <li>• ’809 Patent at 1:34–2:36, 3:1–8:57, 9:50–10:31, 13:40–51, 21:11–17</li> </ul> <p><u>Family 10 Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• ’354 Patent at Abstract, 2:17–32, 2:49–3:2, 4:8–9, 6:18–63, 7:1–3</li> <li>• ’988 Patent at Abstract, 2:14–29, 245–65, 4:5–6, 6:13–57, 6:62–64</li> </ul>
2	each bit in the diagnostic message is mapped to [at least one / one] DMT symbol	<u>Family 1</u> ’686 Patent, Claims 17, 36, 40	<p><u>Proposed Construction</u> Indefinite</p> <p><u>Extrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• 2002 McGraw-Hill Dictionary of Scientific and Technical Terms definition of “map”: An output produced by an assembler, compiler, linkage editor, or relocatable loader which indicates the (absolute or relocatable) locations of such elements as programs, subroutines, variables, or arrays.</li> <li>• 2002 McGraw-Hill Dictionary of Scientific and Technical Terms definition of “mapping”: Preparation of a map or engaging in a mapping operation. 1. Any function or multiple-valued relation.</li> </ul>

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
			<ul style="list-style-type: none"> <li>• Wikipedia.com definition of “map”: This terminology is not completely fixed, as these terms are generally not formally defined, and can be considered to be jargon.</li> <li>• Google definition of “mapped”: “associate (a group of elements or qualities) with an equivalent group, according to a particular formula or model”</li> <li>• ITU-T G.993.2 VDSL2 Standard</li> <li>• ITU-T G.992.1 ADSL Standard</li> <li>• Expert Declaration of Bruce McNair</li> </ul> <p><u>Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• ’686 patent at 3:54-67.</li> <li>• ’686 File History, October 31, 2006 Non-Final Rejection; January 12, 2007 Amendment and Remarks</li> <li>• ’686 File History, March 30, 2007 Final Rejection; April 29, 2008 Amendment, RCE and Arguments</li> </ul>
3	array representing frequency domain received idle channel noise information	<u>Family 1</u> '686 Patent, Claims 17, 36, 40	<p><u>Proposed Construction</u></p> <p>“array of values representative of noise in the frequency domain that was received by a transceiver on respective subchannels in the absence of a transmission signal”</p> <p><u>Extrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• Expert Declaration of Bruce McNair</li> </ul> <p><u>Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• ’686 Patent at 4:25-54.</li> </ul>

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<u>No.</u>	<u>Term</u>	<u>Asserted Claims</u>	<u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u>
			<ul style="list-style-type: none"> <li>• ’686 File History, April 29, 2008 RCE and Amendment and Remarks</li> <li>• ’686 File History, October 20, 2008 Non-Final Rejection</li> <li>• ’686 File History, February 26, 2009 Amendments and Remarks</li> </ul>
4	plurality of bonded transceivers	<u>Family 2</u> ’881 Patent, Claims 17, 18, 21, 23, 25, 26, 29, 31, 33, 37	<u>Proposed Construction</u> two or more transceivers, located on the same side of two or more physical links and each corresponding to one of the physical links, coordinated to transmit or receive a different portion of the same bit stream via a different one of the physical links  <u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>• ’881 patent, Fig. 2; 1:42-56; 1:60-2:5; 2:10-19; 3:58-4:38; 4:57-5:6; 5:44-52; 10:54-58; 11:31-34</li> </ul>
5	operable to	<u>Family 2</u> ’193 Patent, Claim 13 ’601 Patent, Claims 8, 14, 21 ’014 Patent, Claim 1  <u>Family 3</u> ’608 Patent, Claims 1, 4 ’510 Patent, Claim 21, 22	<u>Proposed Construction</u> Plain and ordinary meaning, not mere capability  <u>Intrinsic Evidence</u> Family 6: <ul style="list-style-type: none"> <li>• ’112 Patent at Abstract</li> </ul> Family 9: <ul style="list-style-type: none"> <li>• ’577 Patent at 23:31–26:54</li> <li>• ’348 Patent at 23:30–25:15</li> </ul>

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
		<p><u>Family 6</u> '112 Patent, Claim 8</p> <p><u>Family 9</u> '577 Patent, Claims 16, 30, 38, 53, 54 '348 Patent, Claims 1, 3, 9, 11 '055 Patent, Claim 11 '4473 Patent, Claims 1, 3</p> <p><u>Family 10</u> '354 Patent, Claims 10 '988 Patent, Claim 16</p>	<ul style="list-style-type: none"> <li>• '055 Patent at 23:65–25:11</li> <li>• '4473 Patent at 24:2–26:45</li> </ul> <p><u>Extrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• '577 Patent at 23:31–26:54</li> <li>• '348 Patent at 23:30–25:15</li> <li>• '055 Patent at 23:65–25:11</li> <li>• '4473 Patent at 24:2–26:45</li> </ul>
6	reduce a difference in latency between the bonded transceivers	<p><u>Family 2</u> '881 Patent, Claims 17, 25, 26, 29, 31, 33, 37</p>	<p><u>Proposed Construction</u> Indefinite, or, if not indefinite, “minimize the difference in the configuration latencies between the bonded transceivers”</p> <p><u>Extrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• '706 Patent File History – Office Action dated 1/10/2011; Amdmt and Response Dated 2/11/2011.</li> <li>• '511 Patent File History – Office Action dated 2/15/2011; Amdmt and Resp. dated 8/11/2011; Office Action dated Nov. 18, 2011; Amdmt dated May 14, 2012</li> <li>• Expert Declaration of George Zimmerman</li> </ul>

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
			<u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>• ’881 patent, Fig. 15; 5:23-42; 6:1-35; 6:56-7:36; 10:40-47</li> <li>• ’881 Patent File History – Office Action dated 10/18/2006; Amendment dated 2/28/2007</li> </ul>
7	each bonded transceiver utilizing at least one transmission parameter value to reduce a difference in latency between the bonded transceivers	<u>Family 2</u> ’881 Patent, Claims 17, 25, 26, 29, 31, 33, 37	<u>Proposed Construction</u> Indefinite, or, if not indefinite, “each bonded transceiver configured with at least one transmission parameter value to minimize the difference in the configuration latencies between the bonded transceivers”  <u>Extrinsic Evidence</u> <ul style="list-style-type: none"> <li>• ’706 Patent File History – Office Action dated 1/10/2011; Amdmt and Response Dated 2/11/2011.</li> <li>• ’511 Patent File History – Office Action dated 2/15/2011; Amdmt and Resp. dated 8/11/2011; Office Action dated Nov. 18, 2011; Amdmt dated May 14, 2012</li> <li>• Expert Declaration of George Zimmerman</li> </ul> <u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>• ’881 patent, Fig. 15; 5:23-42; 6:1-35; 6:56-7:36; 10:40-47</li> <li>• ’881 Patent File History – Office Action dated 10/18/2006; Amendment dated 2/28/2007</li> </ul>

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
8	utilize at least one transmission parameter value, for each transceiver in a plurality of bonded transceivers, to reduce a difference in latency between the bonded transceivers	<u>Family 2</u> ’881 Patent, Claims 33, 37	<u>Proposed Construction</u> Indefinite, or, if not indefinite, “configure at least one transmission parameter value of each bonded transceiver to minimize the difference in the configuration latencies between the bonded transceivers”  <u>Extrinsic Evidence</u> <ul style="list-style-type: none"> <li>• ’706 Patent File History – Office Action dated 1/10/2011; Amdmt and Response Dated 2/11/2011.</li> <li>• ’511 Patent File History – Office Action dated 2/15/2011; Amdmt and Resp. dated 8/11/2011; Office Action dated Nov. 18, 2011; Amdmt dated May 14, 2012</li> <li>• Expert Declaration of George Zimmerman</li> </ul> <u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>• ’881 patent, Fig. 15; 5:23-42; 6:1-35; 6:56-7:36; 10:40-47</li> <li>• ’881 Patent File History – Office Action dated 10/18/2006; Amendment dated 2/28/2007</li> </ul>
9	utilize at least one parameter associated with operation of at least one of the first and second transceivers to reduce a difference in latency between the first and second transceivers	<u>Family 2</u> ’193 Patent, Claim 13 ’601 Patent, Claims 14, 21	<u>Proposed Construction</u> Indefinite  <u>Extrinsic Evidence</u> <ul style="list-style-type: none"> <li>• ’706 Patent File History – Office Action dated 1/10/2011; Amdmt and Response Dated 2/11/2011.</li> </ul>



**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
			<ul style="list-style-type: none"> <li>• ’511 Patent File History – Office Action dated 2/15/2011; Amdmt and Resp. dated 8/11/2011; Office Action dated Nov. 18, 2011; Amdmt dated May 14, 2012</li> <li>• Expert Declaration of George Zimmerman</li> </ul> <p><u>Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• ’193 patent at Figure 15, Figure 16, 1:30-36, 6:7-7:40, 10:54-11:13.</li> <li>• ’601 Patent at Figure 15, Figure 16, 1:32-39, 6:8-7:44, 10:54-11:13.</li> <li>• ’193 File History: September 26, 2014 Preliminary Amendment and Remarks</li> <li>• ’601 File History: February 28, 2007 Amendment</li> </ul>
10	“shared memory” / “sharing the memory” / “operable to be shared” / “sharing”	<p><u>Family 3</u></p> <p>’882 Patent, Claims 9, 13</p> <p>’048 Patent, Claims 1, 5</p> <p>’5473 Patent, Claims 10</p> <p>’510 Patent, Claims 21, 22</p> <p>’608 Patent, Claim 2</p>	<p><u>Proposed construction</u></p> <p>Plain and ordinary meaning</p> <p><u>Extrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• Expert Declaration of Rick Wesel</li> </ul> <p><u>Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• ’882 File History: Notice of Allowance, October 6, 2010</li> <li>• ’048 File History: Notice of Allowance, July 27, 2012</li> <li>• ’5473 File History: Notice of Allowance, May 21, 2013</li> <li>• ’608 File History: Notice of Allowance, September 23, 2016</li> </ul>

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
			<ul style="list-style-type: none"> <li>’510 File History: Notice of Allowance, June 13, 2019</li> </ul>
11	“wherein the generated message indicates how the memory has been allocated between the [first deinterleaving / interleaving] function and the [second] deinterleaving function” / “a message indicating how the shared memory is to be used by the interleaver or the deinterleaver”	<u>Family 3</u> ’5473 Patent, Claims 10, 28	<u>Proposed Construction</u> Plain and ordinary meaning, i.e., “the message indicates the amount of memory [that has been allocated to / is to be used by] the [first deinterleaving / interleaving] function and the amount of memory [that has been allocated to / is to be used by] the [second] deinterleaving function”  <u>Extrinsic Evidence</u> <ul style="list-style-type: none"> <li>Expert Declaration of Rick Wesel</li> </ul> <u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>’5473 Patent at 6:16–7:54; 11:8–15; 12:10–23</li> </ul>
12	specifying a maximum number of bytes of memory that are available to be allocated to [a/an interleaver/deinterleaver]	<u>Family 3</u> ’882 Patent, Claims 9, 13 ’048 Patent, Claims 1, 5	<u>Proposed Construction</u> Plain and ordinary meaning  <u>Intrinsic Evidence:</u> <ul style="list-style-type: none"> <li>’882 Patent at Abstract; 1:66–2:4; 2:65–67; 6:4–11; 7:26–9:4; 10:40–65; 11:5–32; 11:39–12:12; 12:19–43; Figure 3</li> <li>’048 Patent at Abstract; 2:3–9; 3:1–3; 6:9–15; 7:30–9:6; 10:41–65; 11:5–11</li> </ul>

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
13	substantially scramble the phase characteristics of the plurality of carrier signals	<u>Family 4</u> '008 Patent, Claim 14	<u>Proposed Construction</u> Plain and ordinary meaning  <u>Intrinsic Evidence:</u> <ul style="list-style-type: none"> <li>'008 Patent at Abstract, Figure 1, Figure 2, 1:48-59, 2:15-3:3, 3:13-21, 4:29-5:31, 6:29-8:22, 9:4-28, 9:53-10:4</li> </ul>
14	multiple carrier signals corresponding to the scrambled carrier signals are used by the first multicarrier transceiver to modulate the same bit value (proposed by Defendants) / same bit value (proposed by Plaintiff)	<u>Family 4</u> '008 Patent, Claim 14	<u>Proposed Construction</u> Indefinite  <u>Extrinsic Evidence</u> <ul style="list-style-type: none"> <li>Expert Declaration of George Zimmerman</li> </ul> <u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>'134 provisional at 1-2</li> <li>'008 patent at Abstract, 2:15-3:3, 3:63-4:28, 4:48-5:4, 9:16-28</li> <li>Applicant Arguments/Remarks Made in an Amendment dated Aug. 11, 2011</li> <li>Applicant Arguments/Remarks Made in an Amendment dated Oct. 3, 2011</li> <li>Notice of Allowance, Nov. 17, 2011</li> </ul>
15	computing a phase shift for each carrier signal	<u>Family 4</u> '008 Patent, Claim 14	<u>Proposed Construction</u>

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
			<p>computing the amount by which a phase is adjusted for each carrier signal</p> <p><u>Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• ’008 patent at Abstract, Figure 1, Figure 2, 1:48-59, 2:15-3:3, 4:29-5:31, 6:29-8:22, 9:4-28, 9:53-10:4</li> </ul>
16	combining the phase shift computed for each respective carrier signal with the phase characteristic of that carrier signal	<p><u>Family 4</u> ’008 Patent, Claim 14</p>	<p><u>Proposed Construction</u> adjusting the phase of each carrier signal by an amount computed for that carrier signal</p> <p><u>Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• ’008 patent at Abstract, Figure 1, Figure 2, 1:48-59, 2:15-30, 3:3, 3:57-62, 4:29-5:31, 6:29-8:22, 9:4-28, 9:53-10:4</li> </ul>
17	phase characteristic <sup>3</sup>	<p><u>Family 4</u> ’008 Patent, Claim 14</p>	<p><u>Proposed Construction</u> plain and ordinary meaning</p> <p><u>Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• ’008 patent at Abstract, Figure 2, 1:33-47, 2:15-3:3, 3:13-21, 3:63-4:47, 5:14-31, 6:41-8:14, 9:4-28, 9:47-10:4</li> </ul>

<sup>3</sup> Plaintiff did not identify this term in its P.R. 4-1 disclosures, and Defendants accordingly object to Plaintiff’s attempt to belatedly propose this term for construction.

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
18	FIP setting	<u>Family 6</u> ’835 Patent, Claims 8, 10, 24, 26 ’112 Patent, Claim 8	<u>Proposed Construction</u> forward error correction and interleaver parameters characterized by the set of parameters for codeword size in bytes, number of information bytes in a codeword, number of parity or redundancy bytes in a codeword, and interleaver depth in number of codewords  <u>Extrinsic Evidence</u> <ul style="list-style-type: none"> <li>• Expert declaration of Bruce McNair</li> <li>• ITU-T G992.3 Standard</li> </ul> <u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>• ’835 patent at Abstract, Figure 3, Figure 4, Figure 5, Figure 6, 1:26-44, 1:44-2:33, 3:27-4:42, 5:52-6:15, 8:4-9:39, 12:8-24, 12:39-13:53, 19:15-30</li> </ul>
19	FIP value	<u>Family 6</u> ’835 Patent, Claims 8, 24	<u>Proposed Construction</u> numerical value of codeword size in bytes, number of information bytes in a codeword, number of parity or redundancy bytes in a codeword, or interleaver depth in number of codewords  <u>Extrinsic Evidence</u> <ul style="list-style-type: none"> <li>• Expert declaration of Bruce McNair</li> <li>• ITU-T G992.3 Standard</li> </ul> <u>Intrinsic Evidence</u>

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
			’835 patent at Abstract, Figure 1, Figure 3, Figure 4, Figure 5, Figure 6, 1:26-44, 1:44-2:33, 3:27-4:42, 5:52-6:15, 8:4-9:39, 12:8-24, 12:39-13:53, 19:15-30
20	flag signal	<u>Family 6</u> ’835 Patent, Claims 8, 24 ’162 Patent, Claims 8, 9	<u>Proposed Construction</u> signal used to indicate when updated FIP settings / interleaver parameter values are to be used.  <u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>’835 patent at Abstract, Figure 6, 8:50-65, 11:4-12:37, 18:47-19:14, 19:15-30</li> </ul>
21	interleaver parameter value	<u>Family 6</u> ’835 Patent, Claims 10, 26 ’162 Patent, Claim 8	<u>Proposed Construction</u> the numerical value of the interleaver depth in number of codewords  <u>Extrinsic Evidence</u> <ul style="list-style-type: none"> <li>Expert declaration of Bruce McNair</li> </ul> <u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>’835 patent at Abstract, Figure 1, Figure 3, Figure 4, Figure 5, Figure 6, 1:26-44, 1:44-2:33, 3:27-4:42, 5:52-6:15, 8:4-9:39, 12:8-24, 12:39-13:53, 19:15-30</li> </ul>
22	steady-state communication	<u>Family 6</u> ’112 Patent, Claim 8 ’835 Patent, Claim 8 and 24	<u>Proposed Construction</u>

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
			<p>the state of the transceiver reached after all initialization and training is completed in which user data is transmitted or received</p> <p><u>Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• ’835 patent at Figure 2, Figure 3, Figure 4, Figure 5, Figure 6, 1:26-44, 2:34-3:16, 3:27-5:20, 5:52-65, 6:25-55, 6:63-67, 8:4-9:49, 11:10-29, 13:54-14:45, 15:11-48, 19:15-30</li> </ul>
23	receive at least one message without using interleaving	<p><u>Family 9</u> ’577 Patent, Claims 37, 53</p>	<p><u>Proposed Construction</u> Indefinite</p> <p><u>Extrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• Expert Declaration of Rick Wesel</li> <li>• ITU-T G.993.1 VDSL1 Standard</li> <li>• ITU-T G.993.2 VDSL2 Standard</li> </ul> <p><u>Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• ’577 Patent at 1:21–26, 9:56–10:2, 9:38–46, 23:32–26:54</li> </ul>
24	Memory has been allocated	<p><u>Family 9</u> ’411 Patent, Claim 10</p>	<p><u>Proposed Construction</u> Plain and Ordinary meaning</p> <p><u>Intrinsic Evidence</u></p> <ul style="list-style-type: none"> <li>• ’411 Patent at 12:4–8, 21:4–11</li> </ul>

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
25	[transmit / transmitting / retransmit / retransmitting / receive / receiving] [by the transceiver] [at least one packet / a packet / the packet / a retransmitted packet / a message / a plurality of messages / at least one message] using [interleaving / deinterleaving / (a/the) forward error correction encoder / (a/the) forward correction decoder / forward correction encoding / forward correction decoding] [and (an/the) interleaver / and (a/the) deinterleaver / and interleaving / and deinterleaving]	<u>Family 9</u> ’577 Patent, Claims 16, 30, 38, 54 ’348 Patent, Claims 1, 3, 9, 11 ’4473 Patent, Claims 1, 3 ’809 Patent, Claims 1, 3, 8, 10, 15, 17, 22	<u>Proposed Construction</u> Indefinite  <u>Extrinsic Evidence</u> <ul style="list-style-type: none"> <li>• Expert declaration of Rick Wesel</li> <li>• ITU-T G.993.1 VDSL1 Standard</li> <li>• ITU-T G.993.2 VDSL2 Standard</li> </ul> <u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>• ’577 Patent at 1:21–26, 9:56–10:2, 9:38–46, 23:32–26:54</li> <li>• ’348 Patent at 1:24–29, 9:41–49, 9:59–10:5, 23:30–25:15</li> <li>• ’4473 Patent at 1:30–35, 9:55–9:63, 10:7–10:21, 24:2–26:46</li> <li>• ’809 Patent at 1:34–40, 9:66–10:7, 10:18–31, 24:10–26:35</li> </ul>
26	higher immunity to noise	<u>Family 9</u> ’348 Patent, Claims 2 and 9 ’809 Patent, Claims 1, 9, 16, 23	<u>Proposed Construction</u> Plain and Ordinary meaning  <u>Extrinsic Evidence</u> <ul style="list-style-type: none"> <li>• Expert Declaration of Rick Wesel</li> </ul> <u>Intrinsic Evidence</u>



**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
			<ul style="list-style-type: none"> <li>• ’809 Patent at 14:60–16:67</li> <li>• ’348 Patent at 14:24–16:29</li> </ul>
27	A multicarrier communications transceiver operable to receive a multicarrier symbol comprising a first plurality of carriers	<u>Family 10</u> ’354 Patent, Claim 10	<u>Proposed Construction</u> Indefinite  <u>Extrinsic Evidence</u> <ul style="list-style-type: none"> <li>• Expert declaration of George Zimmerman</li> </ul> <u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>• ’354 Patent at Abstract, Fig. 2, 1:30–2:45, 4:14–16</li> </ul>
28	receive a first plurality of bits on the first plurality of carriers using a first SNR margin; receive a second plurality of bits on the second plurality of carriers using a second SNR margin	<u>Family 10</u> ’354 Patent, Claim 10	<u>Proposed Construction</u> Indefinite  <u>Extrinsic Evidence</u> <ul style="list-style-type: none"> <li>• Expert declaration of George Zimmerman</li> </ul> <u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>• ’354 Patent at 2:14–19, 3:27–33, 4:10–11; 5:3–6, 5:20–24, 7:29–36, 9:22–24</li> </ul>
29	wherein the first SNR margin provides more robust reception than the second SNR margin	<u>Family 10</u> ’354 Patent, Claim 10	<u>Proposed Construction</u> Indefinite  <u>Extrinsic Evidence</u> <ul style="list-style-type: none"> <li>• Expert declaration of George Zimmerman</li> </ul>

**EXHIBIT B – Defendants’ Terms and Supporting Evidence**

<b><u>No.</u></b>	<b><u>Term</u></b>	<b><u>Asserted Claims</u></b>	<b><u>Defendants’ Construction and Supporting Evidence<sup>1</sup></u></b>
			<u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>• ’354 Patent at 1:45-49, 2:17-40, 3:34-52, 4:65-5:14, 6:4-17</li> </ul>
30	Signal to Noise Ratio (SNR) margin	<u>Family 10</u> ’354 Patent, Claims 10-12 ’988 Patent, Claim 16	<u>Proposed Construction</u> a parameter used in determining the number of bits allocated to each of a plurality of carriers, where the value of the parameter specifies an extra SNR requirement assigned per carrier in addition to the SNR required to maintain a specified bit error rate (BER) for the communication link at a specified bit allocation  <u>Intrinsic Evidence</u> <ul style="list-style-type: none"> <li>• ’354 Patent at Abstract, 2:4-16, 3:31-33, 3:62-67, 4:10-11, 4:14-6:17, 7:57-8:24, 9:22-31</li> <li>• ’988 Patent at Abstract, 2:1-13, 3:27-29, 3:59-64, 4:7-8, 4:11-6:12, 7:49-8:16, 9:12-21</li> </ul>